

Organics Collection In Minneapolis



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Director

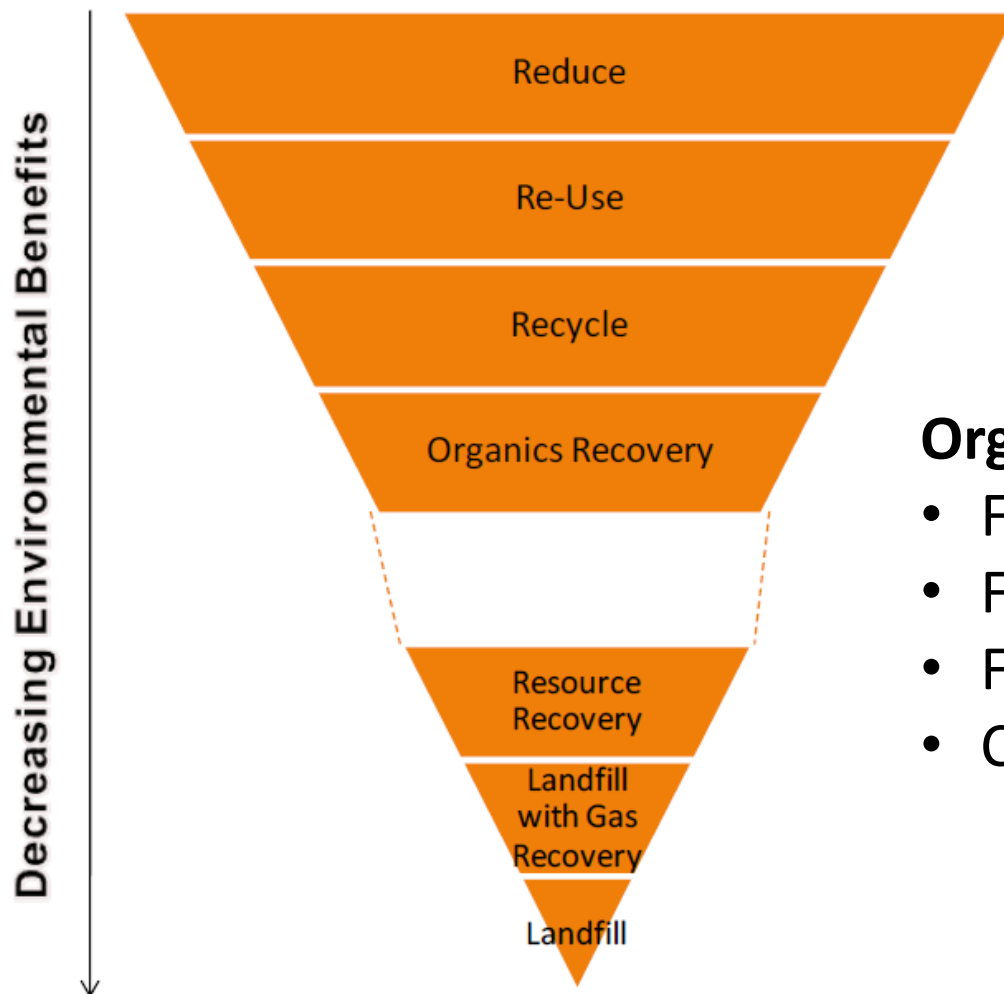
Solid Waste and Recycling Division

Department of Public Works

Outline

1. Why collect organics?
2. State of the Industry
3. What are source-separated organics (SSO)?
4. Pilot Project Goals & Summary
5. Organics Collection Study – Foth
6. Implementation Difficulties
7. City-Wide Organics Recommendation
8. Comments and Questions

Minnesota Waste Management Hierarchy



Organics Recovery:

- Food to People
- Food to Livestock
- Food to Animal Feed
- Composting/Digestion

Why Collect Organics?

Pilot Projects:

- Pilot projects were started in 2008 with the intention of gathering data for a city-wide organics collection program.

City Sustainability Plan Goal:

- 7% Organics Recovery by 2015.

Hennepin County Resolution, 14-0058R1, requires:

- Cities of the first class to provide organic waste collection services to all residents living in 1-to-8 unit buildings no later than January 1, 2015.
- Not implementing SSO program could result in loss of \$864,000 in SCORE funding per year from the County.

Hennepin County Goals – SW Master Plan

Management Method	2015	2020	2025	2030
Source Reduction and Reuse	1-2%	2-4%	3-5%	4-6%
Recycling	45-48%	47-51%	49-54%	54-60%
Organics Recovery	3-6%	4-8%	6-12%	9-15%
Resource Recovery	32-34%	32-33%	30-31%	24-28%
Maximum Landfill	20%	17%	15%	9%

In 2012, Hennepin County achieved 4% organics recovery.

Organic Materials make up 40% of Minnesotans' Garbage

Organic Material Type	Mean Percentage
Food Waste	17.8%
Wood*	5.7%
Yard Waste	2.8%
Compostable Paper	9.8%
Compostable Plastics	0.0%
Other Organic Material**	4.7%
Total	40.8%

*Wood includes treated wood that is not suitable for composting.

** Other Organic Material includes items such as sanitary products and diapers that are not suitable for composting.

Source: 2013 MPCA Waste Characterization Study

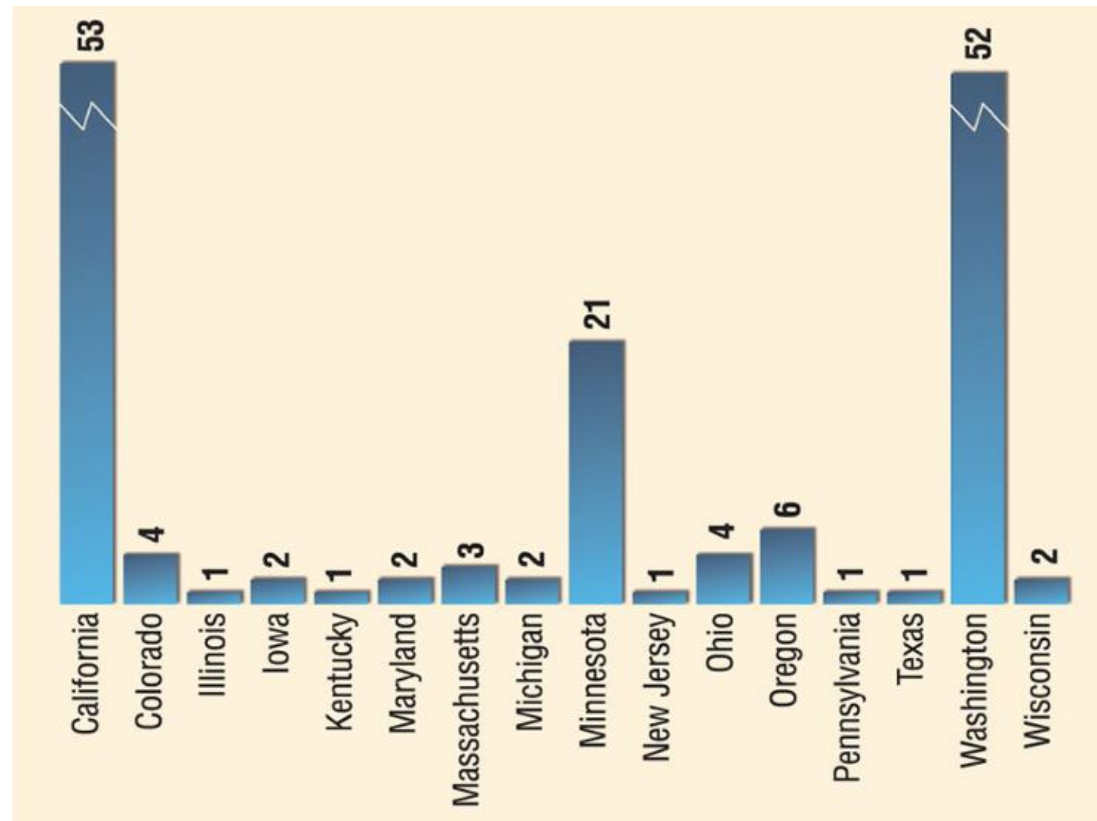
State of the Composting Industry

Residential organics collection programs are found in 15 states providing access to over 150 communities in the U.S.

Minnesota ranks 3rd in number of organics collection programs with 21 programs, behind California (53) and Washington (52).

Source: Biocycle Magazine.

“Residential Food Waste Collection in the U.S.” January 2012, Vol. 53, No. 1, p.23.



State of Composting in Minnesota

Facilities who can process SSO in Minnesota:

- 4 in Twin Cities Metro-Region
 - City of Hutchinson
 - Full Circle Organics - Becker
 - Shakopee Mdewakanton Sioux Community (SMSC) – Shakopee
 - Specialized Environmental Technologies (SET) – Rosemount
- 2 in Greater MN
 - Full Circle Organics - Good Thunder
 - Western Lake Superior Sanitary District (WLSSD) - Duluth

MPCA Compost Rule changes should be finalized in 2014, likely resulting in additional facilities opening.

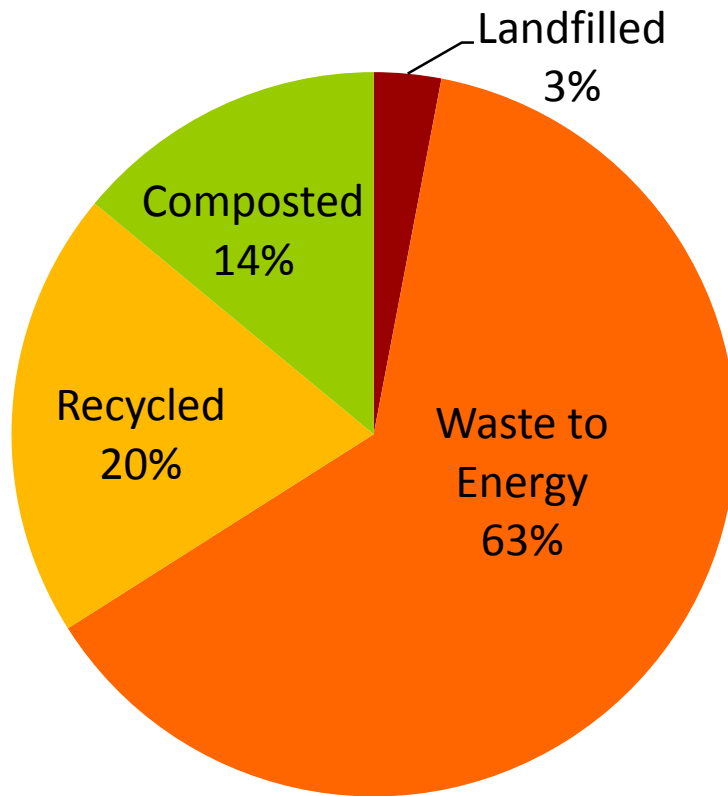
What are source-separated organics (SSO)?

- Food waste
(including meat, bones & dairy)
- Most non-recyclable paper
- Certified compostable plastics
- Plant Debris
- Other items
(cotton swabs, q-tips, wax paper, dryer lint, vacuum bags, etc.)



Minneapolis Waste Overview

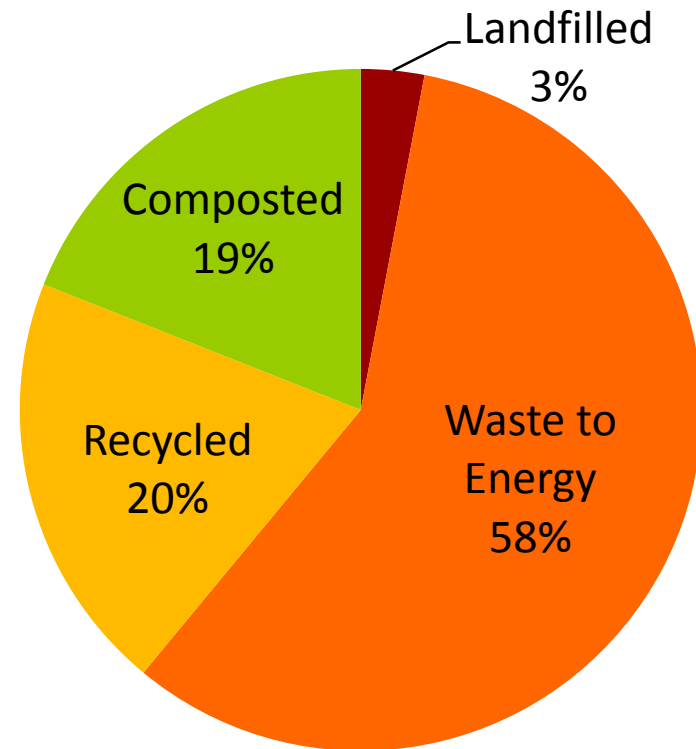
2013 Overview



14% Composted:

- 98% yard waste
- 2% organics

City-Wide SSO (Foth Study Estimates of 7913 Tons of Organics Collected)



19% Composted:

- 70% yard waste
- 30% organics

Pilot Project Design

- Opt-in to participate
- SSO Alone
- Weekly collection
- 64 gallon vented cart
- No additional cost to participate in pilot
- Neighborhood based routes 2008 & 2009
- Garbage collection based routes added in 2010



Summary of Pilot Projects (2008 – Present)

- **5%** of SW&R customers are eligible to participate in existing pilots.
- Pilots include all of Linden Hills and ECCO and parts of: Cooper, Hiawatha, Howe, Longfellow, Philips, and Seward neighborhoods.
 - 30% - 53% of eligible households opted-in to participate.
- Study found each household participating on the route would divert an average 388 lbs of organics per year which equates to about 7.5 lbs/DU/collection.

Pilot Project Next Steps

- Residential Organics Drop-Off Site at Pearl Park (Earth Day 2014)
 - Hale Page Diamond Lake & Tangletown Neighborhood Groups initiative
 - Provide volunteer staffing
 - Provide resident education
 - Partner with Minneapolis Park and Recreation Board
 - Host site for organics carts
 - Monitor and maintain site location
 - Communicate park patron interest to neighborhood groups
- Solid Waste & Recycling
 - Service containers
 - Report volumes collected

Organics Collection Study

November 2012

Report

**Assessment of Residential Source
Separated Organics Collection
Options**

A Study for the City of Minneapolis
Project I.D.: 13M030

Minneapolis, Minnesota

October 2013



Council directed staff to study City collection of SSO. Foth, LLC hired to prepare report that details different options and impacts of organics collection methods.

- Identify most feasible collection options for SSO
- Cost for collection
- Participation rates
- Greenhouse gas emissions
- Obstacles and barriers to going city-wide

October 2013

Report presented to Minneapolis
Transportation & Public Works Committee

Foth Collection Methods Studied

Collection Method:	Cost per Dwelling Unit:
1. No SSO Collection (SSO to HERC)	No Added Cost
2. Collect SSO Alone	\$2.54
3. SSO Commingled with Yard Waste	\$2.52
4. SSO Co-collected with Yard Waste (Blue Bag)	\$5.12
5. SSO Co-collected with Garbage (Blue Bag)	\$7.76

Definitions:

Commingled: SSO and yard waste placed together in one cart.

Co-collected: SSO in Blue Bag placed in same cart as yard waste or garbage with the intention of separating the two materials.

1 - No SSO Collection (SSO to HERC)



Yard Waste
(Own containers & compostable bags)



Recycling Cart
(96 gallon or 64 gallon)



Garbage Cart
(22 gallon or 94 gallon)

Estimated Increased Cost: No added cost.

2 - SSO Alone



Yard Waste

(Own containers & compostable bags)



Organics Cart

(30 gallon or 64 gallon)



Recycling Cart

(96 gallon or 64 gallon)



Garbage Cart

(22 gallon or 94 gallon)

Estimated Increased Cost: \$2.54 per DU per month

3 - SSO Commingled with Yard Waste



**Organics &
Yard Waste Cart**

(30 gallon or
64 gallon)



Recycling Cart

(96 gallon or
64 gallon)



Garbage Cart

(22 gallon or
94 gallon)

Estimated Increased Cost: \$2.52 per DU per month

Incremental Cost Estimates (Staff Calculations)

SSO Collection Option	\$ per DU per month
Collect SSO Alone	\$2.38- \$3.25
SSO Commingled with Yard Waste	\$2.52 - \$4.09

The final cost increase per DU per month is pending negotiations with MRI.

Barrier to Commingled Collection

Emerald Ash Borer (EAB)



April – end of September Yard waste needs to be ground before leaving the quarantine zone (Hennepin & Ramsey Counties).

Difficult material for processors.

Item	SSO Alone	Commingled
Grinding (EAB Quarantine)	No grinding required (for SSO portion) Yard Waste grinding is same as current.	Additional grinding required for SSO portion that is commingled with YW

Recommended Collection Method

Should we decide to move forward, our recommended method of collection is:

SSO Alone Collection

- 64 gallon cart

- Potential to commingle SSO and Yard Waste in future
- Provides greater options for processing of SSO and processing of Yard Waste



Vehicle & Staff Needs for SSO Alone Collection

Item	Quantity Needed	MRI Needs
Trucks	11 total <ul style="list-style-type: none"> • 8 route packers • 1 spare packer • 1 cart service • 1 pick-up 	10 total <ul style="list-style-type: none"> • 8 route packers • 2 spare packers
Staff	21	16
\$ per DU per Month	\$2.38 - \$3.25	

Summary of Adding SSO Collection

One-Time Cost Estimates:

- 60,000 carts (Inc. 10,000 small garbage carts) \$2.7 million
- 11 trucks \$2.5 million
- Short-Term Facility Modifications Pending

Ongoing Cost Estimates:

- 21 full-time City staff \$1.5 million per year
- MRI Additional Expense \$2 million per year
- Vehicle Maintenance Pending

Tipping Fee Savings:

- 7913 Tons diverted from HERC \$80,000 per year

Result:

- Increase compostable waste stream from 14% - 19%.

Next Steps if SSO Collection

- Receive direction from Council
 - Appropriation increase required to purchase trucks and carts
- Program Implementation Plan
- Explore short and long-term options for facility improvements needed and truck storage and maintenance.
- Negotiate with MRI for SSO collection
- Acquisition of:
 - New truck purchases (8 months)
 - Carts for collection of SSO (5 months)
- Hire staff (3 months)

2014 SW&R Service Costs

SW&R Customers – all buildings w/ 1-4 DUs and townhomes (Ord. 225.600)

- Base Fee: \$17.60 (per dwelling unit)
 - Includes garbage, recycling, yard waste, voucher program, and bulky/large item collection costs.
- Weekly Garbage Collection:
 - Small 22 gallon cart - \$2.00
 - Large 94 gallon cart - \$5.00

Minimum Base Fee with SSO Alone Collection: \$19.98 – \$20.85

Resident's who participate in organics collection and don't already have a small garbage cart should be able to reduce the number or size of their garbage cart(s), saving a minimum of \$3.00 per month.

How to Address 5-to-8 DU buildings?

225.780: Recycling at Buildings Having Two or More Dwelling Units:

Current Ordinance:

- Must offer the opportunity to recycle to tenants
- Adequate containers on premises
- Provide annual education to tenants

Update Ordinance:

- To include the requirement to offer opportunity for organics collection.

Comments or Questions



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